

BY KATHARINA MIEDZINSKA



Experts to provide insights into percutaneous biopsy procedures

Image-guided percutaneous biopsy (PB) plays a crucial role in the management of cancer patients.

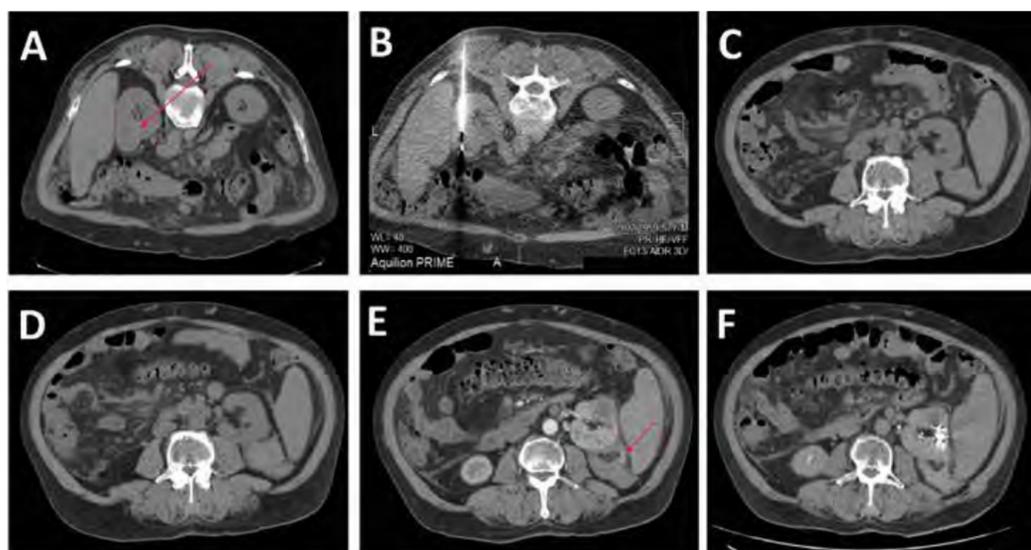
Percutaneous biopsy procedures, which include both fine needle aspiration biopsy (FNA) and core needle biopsy (CNB), are often necessary to get confirmation of a diagnosis of malignancy, without which a treatment plan cannot be established, as well as to characterise locoregional spread, possible lymph node involvement, and distant metastases.

In oncological patients who are undergoing treatment, repeated biopsies can be necessary to evaluate the response to therapy, to characterise residual disease or to confirm recurrent cancer. In the past few years, different techniques have been developed that allow appropriate tissue samples to be obtained from different parts of the body, to establish a firm pathological diagnosis, as well as various needles and devices for the respective applications.

PB can be performed using a variety of imaging modalities for guidance, including US, CT, MR, and fluoro-CT. Improvements in needle designs, the development of new biopsy techniques, and continuous advances within the field of image-guided technology have contributed to improving the procedure. It is generally a safe method with high performance that can be used for cancer diagnosis and treatment; the efficacy and safety results of percutaneous needle biopsy depend on the technique, choice of indication, and patient monitoring.

"Despite some concerns related to its safety and yield, PB allows the detailed analysis of heterogeneous tumours, which paves the way to a personalised therapeutic approach. This is particularly relevant, for example, in cases in which post-therapeutic imaging, such as PET/CT, shows a non-uniform pattern of response, making it necessary to gain more information about the different parts of a tumour," said Prof. José Bilbao, from the department of radiology, Clínica Universidad de Navarra, Pamplona, Spain, who will chair this special focus session today.

He also pointed out the importance of a close interdisciplinary collaboration and the important role of radiologists within an inter-



Patient with left renal mass suspicious for renal cell cancer (A, planning CT w/o contrast, mass indicated by red arrow); medically inoperable. Coagulopathy due to liver cirrhosis. Biopsy in prone position, 18G needle, coaxial system (B). Small haematoma posterior to the left kidney followed by rotation of the patient in supine position in order to improve compression (C). CT control five minutes later (C) showed an increase of the haematoma, vitals normal, minor pain (D), leading to decision to perform CT with contrast agent (E) which shows active bleeding (red arrow). Immediate angiography with coiling of the needle track (not shown) controlled the bleeding; vitals normal, minor pain. (F) shows regular follow-up CT w/o contrast four hours after angio displaying just a small haematoma, illustrating the beneficial effect of rapid complication management. Patient was discharged the next day. (Provided by Prof. Max Seidensticker, University Hospital Munich, Germany)

disciplinary team: "The radiologist performing PB needs to be a part of the multidisciplinary tumour board (MDTB) deciding on the individualised management of each patient, which is essential to facilitate decision-making, accelerate and improve processes, extend treatment options offering cross-speciality knowledge, and to sequence therapies after the identification of all available options. Within the MDTB, radiologists should progress from skilful technicians performing procedures to clinical consultants who treat patients and participate actively in continuity of care and the follow-up process," he said.

The latter will also be the key topic of the presentation by Prof. Max Seidensticker, from the department of radiology at the University Hospital in Munich, Germany, although his talk will refer in particular to follow-up of patients in the immediate post-procedure. "To know the specific risks of biopsies and to be aware of the patient's

individual risk is fundamentally important when checking patients in the immediate post-procedure and making decisions regarding the appropriate post-procedure follow-up," he said. "Regardless of the specific imaging after a biopsy, monitoring of vital signs periprocedural and immediately after a procedure is mandatory, especially after biopsies of parenchymal and well vascularised structures," he added.

Seidensticker: "It is important to always bear in mind that early identified complications are easier to handle than late ones, as in cases of late complications important time might be lost and you usually have to handle an unstable patient in addition to the treatment of the complication."

During his presentation, Seidensticker plans not only to discuss how to check patients in the immediate post-procedure and how to handle the follow-up process, but also to provide an insight into the management of post-procedure

complications. "Not all of them are avoidable," he said, suggesting that when it comes to the handling of complications, a part of the answer lies in "being optimally prepared for everything" and not forgetting the "obvious". "Making sure, prior

to the procedure, that all material needed to handle specific complications is available in the room, and knowing which number to call in case of major complications is just as important as being aware of standard procedures covering complication management. Last but not least, knowledge about potential complications and proper patient monitoring are the keys to identifying complications early and to reacting accordingly, as you can only ever realise what you know and expect," he concluded.

However, Seidensticker is not the only person providing guidance during the course. Other radiologists will share their suggestions as well, including Dr. Peter Popovic, from the clinical radiology institute at the University Medical Center Ljubljana, Slovenia, who will familiarise ECR delegates with indications for percutaneous biopsy and pre-treatment evaluation.

Furthermore, Dr. Laura Crocetti, from the division of diagnostic imaging and intervention, Pisa University School of Medicine, Italy, will discuss how to guide procedures and the pros and cons of different imaging modalities for guidance, while Dr. Paulo Manuel Vilares Morgado from the Hospital S. João Alameda Prof. H. Monteiro in Porto, Portugal, will pursue the question of how to carry out a procedure, focusing especially on needles and the handling of biopsy specimens.

Special Focus Session

**Thursday, February 28, 08:30-10:00, Room F2
SF 5b Basic interventional radiology for non-interventionalists: let's start with biopsy!**

- » **Chairperson's introduction**
J.I. Bilbao; Pamplona/ES
- » **How to decide indications and pre-treatment evaluation**
P. Popovic; Ljubljana/SI
- » **How to guide your procedure**
L. Crocetti; Pisa/IT
- » **How to do your procedure**
P. Vilares Morgado; Porto/PT
- » **How to follow-up on your patients**
M. Seidensticker; Munich/DE
- » **Panel discussion: Deciding to biopsy within a multidisciplinary board**



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